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CURRICULUM IMPLEMENTATION IN MANITOBA: LITERATURE REVIEW

SUMMARY

Curriculum implementation is a complex and multidimensional process of altering existing educational practices in order to achieve more effective outcomes for students. Common throughout curriculum implementation literature are theories and elements of effective implementation which practice is expected at least to resemble. Based on actual interviews, case studies, and research, evidence examined in curriculum implementation is one area where, although practice and theory often do resemble one another, some of the similarities and discrepancies require attention.

- The literature concerning curriculum implementation outlines three distinct stages: awareness, adoption, and actual implementation. Following the literature, an attempt was made in the surveys and, to a lesser extent in the case studies, to discuss implementation using these stages. It became evident, however, that in practice the stages were neither clear cut, ordered, or defined. A certain form of implementation usually begins with minimal awareness and no real adoption. The process is more an interactive one where the three stages mix according to the teacher's growth in understanding, commitment, and classroom use.

- The literature stresses that curriculum implementation is a process, not an event. According to our research, few teachers view curriculum implementation in process terms, and in fact they may not need to do so. However, some school divisions have established a planned and structured process for the implementation of new curricula.

- Implementation, according to the literature, is a highly personal and social experience for those involved, and will be identified, developed, and adopted over time. Field research demonstrates that, for teachers, part of implementing curricula is the modification of the curriculum to suit the teacher's own style, needs of students, and different classroom organizations (eg. multi-graded classrooms). This development is necessary at the classroom level if successful implementation is to be achieved.

- "Developing and using a plan is itself an implementation problem." As with any new innovation, a new curriculum cannot be laid on. People must learn to use it and modify it over a period of time, according to the literature. In practical terms, however, curricula are developed and timelines are set for their implementation. Manitoba Education may also provide introductory awareness sessions. However, the development of the curricula does not include an implementation plan and rarely seems to include provision for ongoing revisions.

- "Interaction and technical assistance are important to implementation because it is a socialization and clarification process." For all school principals surveyed, workshops/inservices by specialists were seen as the best way to assist teachers in implementing curriculum. In addition, almost all 1,500 of the elementary and secondary principals surveyed indicated an involvement in professional development workshops/inservices, individualilzed assistance to teachers, and implementing curriculum guides. A large number of secondary and elementary teachers indicated that workshops and seminars conducted by specialists were the best way to assist teachers to implement new curriculum. At the local level, other teachers/colleagues were considered the most helpful in initiating new curriculum by offering encouragement and advice.

L'IMPLANTATION DES PROGRAMMES SCOLAIRES AU MANITOBA : ANALYSE DE LA DOCUMENTATION

RÉSUMÉ

La mise en oeuvre de programmes est une opération complexe à plusieurs dimensions visant à modifier les méthodes didactiques existantes afin de les rendre plus efficaces. Presque tous les ouvrages portant sur l'élaboration de programmes scolaires contiennent des théories et des lois qui sont censées gouverner à tout le moins leur mise en application. Les entrevues, les études de cas et les recherches ont révélé que dans le domaine de la mise en oeuvre des programmes il faut être très attentif à certaines similarités et différences, quoique souvent la théorie et la pratique se ressemblent.

- Les ouvrages portant sur l'implantation des programmes définissent trois étapes distinctes : la prise de conscience, la décision et la mise en oeuvre. On a tenté au cours de sondages et, dans une moindre mesure, d'études de cas, de discuter de l'implantation des programmes en suivant les trois étapes définies dans ces ouvrages. On s'est vite rendu compte, cependant, que dans la pratique ces étapes n'étaient pas aussi bien déterminées et définies ni aussi précises. Une certaine forme d'implantation débute d'habitude avec une prise de conscience minimale sans qu'une décision véritable ne soit prise. Il s'agit plutôt d'une combinaison des trois étapes qui varient en fonction du degré de compréhension et d'engagement de la part de l'enseignant et de l'utilisation qu'il fait du programme en classe.

- Les ouvrages soulignent que la mise en oeuvre des programmes est un processus complexe et non une opération ponctuelle. Selon nos recherches, peu de professeurs voient l'implantation des programmes comme un processus complexe. De fait, ils n'ont peut-être pas à le faire. Cependant, certaines divisions scolaires ont un plan d'action bien structuré pour l'implantation des programmes.

- Toujours selon ces ouvrages, l'implantation de programmes dépend beaucoup de facteurs personnels et sociaux dont les modalités finiront, avec le temps, par être précisées, élaborées et intégrées. Des recherches révèlent que, pour les enseignants, une part de l'implantation est l'adaptation des programmes existants au style de l'enseignant, aux besoins des élèves et aux situations en salles de classe (exemple : classes comprenant plusieurs niveaux scolaires). Il s'agit là d'une phase nécessaire à la réussite de l'implantation.

- "L'élaboration et l'utilisation d'un plan est en soi un problème d'implantation." Comme pour toute innovation, un nouveau programme ne peut pas être imposé d'emblée. Les gens doivent apprendre à s'en servir et le modifier graduellement. Néanmoins, en pratique, les programmes sont élaborés et les échéances sont fixées en vue de l'implantation. Éducation Manitoba pourrait également offrir des séances préparatoires. Toutefois, au cours de l'élaboration des programmes, on ne prévoit pas de plan d'implantation ni, si ce n'est que très rarement, les révisions à leur être apportées par la suite.

"L'interaction ainsi que l'aide technique sont importantes dans l'implantation qui est, de fait, un travail de coopération et d'explication. Tous les directeurs d'école consultés ont perçu les ateliers et les recyclages comme étant le meilleur moyen d'aider les enseignants dans l'implantation des programmes d'étude. En outre, la quasi-totalité des 1 500 directeurs d'écoles élémentaires et secondaires ont affirmé qu'ils ont participé aux ateliers de perfectionnement professionnel ou aux recyclages, qu'ils ont apporté une aide individuelle aux enseignants ou qu'ils ont favorisé la mise en application de guides sur les programmes d'étude. Bon nombre des enseignants des niveaux élémentaire et secondaire ont indiqué que les ateliers et les séminaires dirigés par des spécialistes étaient le meilleur appui que l'on puisse leur offrir en matière d'implantation des programmes. Au niveau local, les enseignants de l'endroit et leurs collègues ont été jugés les plus utiles dans l'introduction de nouveaux programmes du fait qu'ils offraient de l'encouragement et des conseils.

I. INTRODUCTION

Despite the numerous curriculum theories and models propounded, little consensus exists as to why some innovations are readily implemented while others fail to be incorporated into the school system.

The main purpose of this paper is to discuss research evidence on the process of curriculum implementation in schools. There are four main sections to the review. First the review of the literature will consider the question: Why study implementation? Section 2 will profile the problems of defining and measuring implementation. Section 3 will identify a number of specific factors affecting implementation and, in the final section, policy implications will be reviewed.

II. WHAT IS CURRICULUM IMPLEMENTATION?

Curriculum Implementation is a complex and multi-dimensional process of altering existing educational practices in order to achieve more effective learning outcomes for students. The change may be externally imposed or voluntarily sought; explicitly defined in detail in advance or developed and adapted incrementally through use; designed to be used uniformly or deliberately planned so that users and practitioners can make modifications according to their perceptions of the needs of the situation.

It should be noted that a clear distinction has been made between curriculum adoption (ie. the formal introduction of the curriculum guide, initial purchase of materials and orientation sessions) and curriculum implementation (ie. a longer period of active implementation accompanied by measurable differences in classroom practices and student behavior).

Effective curriculum implementation must consider and include the following elements:

1. Implementation is a process, not an event.
2. The educational innovation is not immutable, the innovation will get modified, developed and adapted over time.
3. Implementation is a highly personal and social experience for those involved.

4. Implementation is a process of clarification, whereby users and practitioners understand and change new material, behavior and thinking.

5. Interaction and technical assistance are important to implementation because it is a socialization and clarification process.

6. Planning at the school and at the system level is a necessity if obstacles are to be addressed.

7. The educational system and school plans to guide action/change must address teaching materials, approaches and beliefs, and monitor and gather information used to assess progress.

8. Developing and using a plan is itself an implementation problem.

9. One hundred percent implementation is impossible and undesirable.

10. The goal of implementation is to develop the capacity for systems, schools and individuals to use innovations and revisions.

III. WHY STUDY IMPLEMENTATION?

Less than a decade ago, there was a singular lack of curiousity about what happened to new curriculum between the time it was designed, and various people agreed to carry it out, and the time that its consequences became evident (Fullan, 1977; Leithwood and Montgomery, 1980; Farrar, Desanitis and Cohen, 1979). It was taken for granted that innovations would be implemented more or less as planned and that the actual use would eventually correspond to planned or intended use. The whole area of curriculum implementation, was viewed as a "black box" where innovations entering one side produce the consequences emanating from the other (Fullan and Pomfret, 1977). By investigating implementation directly, we can identify some of the most problematic aspects of bringing about change and can understand some of the reasons why many educational changes fail to become established.

IV. MEASURING IMPLEMENTATION

There are definitional and methodological problems when assessing whether an innovation has been implemented. This section will identify the main issues and dilemmas by examining some case studies in which attempts were made to measure implementation. These case studies fall into two main categories: (1) the fidelity perspective; and, (2) the process perspective. From the point of view of implementation as seen in both the fidelity and process perspective studies, curriculum change consists of primarily of five dimensions: changes in (a) subject matter or materials; (b) organizational structure; (c) roles/ behavior; (d) knowledge and understanding; and, (e) value internalization - all of these vis-a-vis a particular innovative idea or development. Case studies demonstrating both perspectives will be discussed.

A. Fidelity Perspective

The fidelity perspective determines the degree of implementation in terms of the extent to which actual use of the innovation corresponds to planned or intended use. There are two types of studies with a fidelity perspective: those centering on organizational change and those that focus upon specific curriculum innovations. Illustrations of each type of study will be reviewed.

1. Organizational Focus

One of the best examples of an attempt to measure the degree of implementation of an organizational change was conducted by Gross, Giacquinta and Berstein's (1971) study of an inner-city elementary school implementing a major change in the role of the teacher. Degree of implementation, was defined "as the extent to which organizational members have changed their behavior so that it is congruent with the behavior patterns required by the innovation" (Gross, Giacquinta, and Bernstein, 1971, p.16).

The researchers operationalized the new role in terms of twelve behaviors that they felt the teacher should display of the role that was being implemented. This was defined as quality of implementation. A second measure, the quantity of implementation, was assessed through observation by recording the frequency with which the teacher engaged in attempting the new model.

Gross, Giacquinta, and Bernstein found that teachers displayed behavior congruent with the innovation about 16% of the time. Findings on the quality of use were also low. The specific criterion that ranked highest concerned "permitting" students to do certain things. The criteria that ranked lowest were those that required teacher initiative, such as acting as a catalyst. This indicates that some components of an innovation are more difficult to implement than others.

2. Curriculum Focus

As Fullen and Pomfret (1977) contend, organizational characteristics are likely to be the most difficult of the curriculum's components to implement, and, of these organizational components, role relationships often present the most difficulties. For example, Solomon, Ferritor, Heann and Myers developed a 95 item scale to assess the degree of implementation of a pre-school curriculum. Data were collected on fifteen classrooms through documentary analysis and teacher interviews, as well as by direct classroom observation.

Their findings are of particular interest. They found that some of the dimensions were implemented more effectively than others. The scores were lower for "planning and evaluation", "teacher roles", "unit approach", and "parent involvement" than for items such as "physical setting", "grouping", "organization and use of time". The elements more effectively implemented tended to involve changes that teachers had more direct control and participation, such as role changes.

Crowther (1972) examined the implementation of an elementary social studies curriculum by direct observations and teacher questionnaires in Alberta. The main difference between Crowther's study and other questionnaire studies on reported implementation, is the use of relatively specific explicit components on which teachers were required to report.

Crowther also tested the validity of his measurement. He had the chairman and two other members of the provincial social studies curriculum committee examine the items for content validity. All agreed that the items accurately represented the distinguishing features of the new curriculum.

Finally, Crowther examined the perceptions of principals and found that the principals' ratings did not correspond with the other method just described. This discrepancy calls into question the value of relying on principals' knowledge of degree of implementation. Nevertheless, Crowther's study shows the promise of using the questionnaire method to assess degree of implementation provided that it is specific and validated with other methods. In this case, time and cost ruled out the use of observational methods on such a large sample.

The L. Downey Research Associates (1975) carried out a larger, more comprehensive study than Crowther of the same social studies curriculum in Canada. Three major levels of implementation were investigated: (a) the appropriateness of and knowledge about the Master Plan (the Alberta Department of Education's Curriculum Guidelines); (b) the appropriateness and effectiveness of programs developed at the local level; and, (c) the appropriateness and effectiveness of programs at the typical school/classroom level.

The results and highlights of their research can be briefly summarized in the following:

(a) The Master Plan was appropriate and reflective of the basic goals ie. goals concerned with involving students in the confrontation of real issues dealing with what is, as well as with what ought to be.

(b) 90% of the teachers claimed to be aware of the Master Plan, but most of the teachers were not familiar with the substance of it.

(c) Teachers differed widely in their knowledge of the program and tended to ignore the more subtle orientations.

All in all, this study illustrates some comprehensive methods of assessing implementation and reiterates a common finding that implementation at the user level reflects considerable discrepancies from intended plans.

The most sophisticated way of assessing degree of implementation has been developed by Hall and Loucks (1974). Hall and Loucks suggest that individual users reflect different levels of use or degrees of implementation and may go through different levels over time as they develop the ability to use the innovation. They formulate the following levels: nonuse, orientation, preparation, mechanical use, routine, refinement, integration, and renewal. Hall and Loucks were able to validate these categories by using a "focused interview" with teachers about their use of a given innovation, and by having tapes of the interview rated by trained innovations. Many critics of Hall and Louck's approach have expressed reservations about being too specific about the implementation levels. This concern has prompted some researchers to adopt an approach to the study of curriculum change that focuses more exclusively and explicitly upon the overall implementation process.

B. Process Perspective

The process perspective is directed at analyzing the complexities of the change process, that is, how innovations become developed or changed during the process of implementation.

Elliot and Adelman (1974) studied attempts to implement an inquiry/discovery, teacher/pupil role relationship model in England. Although they did not quantify their data, the study is discussed because of its focus upon the users, both teachers and students. Moreover, unlike most of the studies reviewed, most of the curriculum was not pre-specified, but evolved with the teachers and students. The project goal was for the researchers to establish a procedure with teachers, whereby together they could monitor the extent to which teachers operated in accordance with the procedural principles of inquiry/discovery.

The researchers identified pupils as a main data source on the grounds that it was the pupils' perceptions of teachers' intentions as conveyed by teachers' verbal behavior which would, in part, determine the success or failure of the undertaking. Pupils' perceptions were gathered by the researchers by their observing lessons, interviewing pupils on tape about the teaching, and, with the pupil's permission, giving the teacher a copy or transcript.

The researchers also tried to foster feedback among the teachers. Teaching teams were formed in each school, consisting of two to four teachers drawn preferably from different subject areas.

Many teachers found it difficult to create the openness and honesty necessary for accurate feedback from pupils about their performance as teachers. Many also found their self-esteem and feelings of professional confidence threatened. Sharing one's classroom experiences with others was also seen as a difficulty. These aspects emphasize the difficulties of bringing about role relationship changes between teachers and students, even when these are directly addressed. The study also represents an approach to defining implementation characteristics involving student and teachers; that is, defining much of the implementation behavior during the process of initial use, not prior to it.

The Elliot and Adelman study illustrates an attempt at fostering implementation based on the need for continual feedback and self-monitoring in a supportive, open, and trusting interpersonal environment. Furthermore, this study provides some insights into the complexities of role relationship and tends to support the belief that the most difficult components of proposed curriculum changes to implement are the role relationship changes.

V. FACTORS AFFECTING IMPLEMENTATION

Given the complexity of the phenomenon of implementation, the factors that could influence it are potentially enormous in number. Moreover, since much of the research contains serious conceptual and operational inadequacies, any findings must be treated with caution. Factors affecting implementation may differ in kind and/or emphasis depending on whether the fidelity or process approach is examined.

The various factors in affecting implementation can be organized into four broad categories, each containing a number of specific variables:

(a) Characteristics of the Innovation

1. Need for the change
2. Explicitness and complexity of the change
3. Availability and quality of materials

(b) Characteristics at the School System Level

4. History of attempts
5. Expectations and training of principals
6. Teachers and professional development
7. Board/community support

(c) Characteristics at the School Level

8. Principal's actions
9. Teachers and teachers' relations and actions

(d) Factors External to the School System

10. Role of Manitoba Education and other agencies

These ten factors operate in an interactive and dynamic fashion as a process over time. The more factors positively influencing implementation, the more effective it will be. Not all of these factors can always be altered, but a successful plan should consider how to make their effect and influence more supportive of implementation (Fullan and Park, 1981; Fullan, 1982).

Therefore, researchers and practitioners involved in curriculum implementation should be aware of the need to address these factors continually.

VI. IMPLICATIONS

From the discussion, it is evident that implementation is a highly complex process involving relationships between users and managers in a process characterized by inevitable conflict. As Fullan and Pomfret suggest, current central policies (at both the national and school district level) at best promote adoption. These policies do not have a strong influence on implementation because they fail to address those factors most critical for implementation. In order to achieve effective implementation, some major inter-related steps are necessary.

First, it is essential that teachers feel a strong sense of ownership towards input in all aspects and at all stages of curriculum planning and development, so whatever is designed and developed will be relevant and viable in the classroom. The ultimate human resource who brings about effective learning is the classroom teacher, because it is the teacher who is the "manager" of the learning environment. Arieh Lewy (1977) has found that the best co-operation in field testing curricula comes from those teachers who have been involved in the process of curriculum development. Moreover, the best co-operation in adopting, implementing, and evaluating a curriculum would likely come from the schools where the teachers have participated in the development process.

Secondly, as Berman and McLaughlin (1976:368) suggest, evaluation of innovations during the first stages of implementation should be directed toward facilitating implementation and local system capabilities through data feedback/monitoring and other forms of support rather than focusing upon success and failure of programs.

Thirdly, and related to the aforementioned, the incentive and motivation system would have to be modified dramatically at all levels. Effective implementation of social innovations requires time, personal interaction and contacts, in-service training and other forms of people-based support. Research has shown that, if the process of unlearning old roles and adopting new ones is to occur, there is no substitute for personal contact among implementers, and between implementers and planners/consultants. There is an absence of such opportunities on a regular basis during the planning and implementation of most innovations. New approaches to educational change and innovation should include longer time perspectives, more small-scale intensive projects, more resources, and time. Methods for contact amongst implementers at both the initiation or adoption stages and particularly during implementation should also be included.

A great deal of work is needed on active participation and mutual planning between implementers and consultants, on gathering and analyzing data on different aspects of the process, on assessing and monitoring the consequences of different strategies, and on deriving specific policy recommendations at all levels of the political and educational system. In conclusion, the quote formulated by Williams (1975:566) is highly appropriate:

> "Always think about implementation problems, and always worry that others are not thinking about them, but do not expect major improvements to come quickly."

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